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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,987	05/11/2006	Frank Warnecke	710270-35	5123
Robert I. Stearns Dickinson Wright 38525 Woodward Avenue Bloomfield Hills, MI 48304-2970				
7590 04/23/2010			EXAMINER PATEL, VISHAL A	
			ART UNIT 3676	PAPER NUMBER
			MAIL DATE 04/23/2010	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/578,987

**Applicant(s)**

WARNECKE ET AL.

**Examiner**

Vishal Patel

**Art Unit**

3676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 January 2010.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-15 and 18-21 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 11-15 and 18-21 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 11-15 and 18-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18, "a radial...affixed", unclear what applicant is trying to claim, since a housing portion is claimed in claim 1 and how does a radial wave seal ring having an external surface on which the static seal portion is affixed? As seen in drawings and specification, the static seal is on the housing portion and the static seal has an outward surface with radial wave.

Claim 11, applicant claims a friction reducing elements but the friction reducing elements are PTFE but applicant claim 0-10% of PTFE, unclear how their is a friction reducing elements.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Stephens et al (US. 2,889,163). For examination purpose there is 0% of PTFE.

Stephens discloses a seal element having at least one housing portion (e.g. 14), at least one dynamic seal (e.g. 16), at least one static seal portion made of a static seal material (e.g. 13),

the static seal portion is at least partially covered with a hardenable (e.g. method limitations not given patentable weight in an apparatus claim, see MPEP 2113) material (e.g. thermosetting material which has acrylic resin which is considered to be acryl polymer) comprised of friction reducing element, the hardenable material comprises the following proportional makeup, 5-20% acryl polymer, 0-10% PTFE and 65-95% of Water (e.g. column 4, line 20-25 and line 34). The hardenable material is hardenable under the effects of temperature, the hardenable material is a polymer glue (e.g. thermosetting resin which is a polymer glue).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 11-14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hans (DE 2918787) in view of Stephens and further in view of Sugino (JP2155980). It is noted that the hardenable material has PTFE.

Hans discloses a seal element having at least one housing portion (e.g. 2), at least one dynamic seal (e.g. 3), at least one static seal portion (e.g. 5) affixed to the housing portion, the static seal portion at least partially covered with hardenable material comprised of friction reducing element, the hardenable material comprises 5-20% acryl polymer and 0-10% PTFE (e.g. the layer 6 is acryl polymer). The hardenable material is hardenable under the effects of temperature and is a polymer glue (e.g. this would be the case since the hardenable material is what is claimed by applicant).

Hans discloses the invention substantially as claimed above but fails to disclose that the hardenable material has water. Stephens discloses to have a hardenable material with acryl polymer, 0-10% PTFE and Water (e.g. column 4, line 20-25 and line 34). It would have been obvious to one having ordinary skilled in the art at the time of the invention to have the hardenable material of Hans to have Water as taught by Stephens, to provide a material that is resistant to oil and grease (e.g. column 4, lines 35-45 of Stephens). It is noted that applicant has not provided nay criticality to the percentages as claimed.

Hans and Stephens disclose the claimed invention except for the percentages of acryl polymer, PTFE and Water. Sugino disclose to have a compound with acryl polymer or rubber with PTFE. It would have been obvious to one having ordinary skill in the art at the time the invention to have the hardenable material of Hans and Stephens to have PTFE and a particular percent of acryl polymer as taught by Sugino, to provide air tightness (e.g. see abstract provide by applicant of JP2155980).

Hans, Stephens and Sugino disclose the claimed invention except for the percentages of acryl polymer, PTFE and Water in claim 21. Discovering an optimum range of a result effective variable involves only routine skill in the art. In re Kulling, 895 F.2d 1147, 14 USPQ 2d 1056. Without the showing of some unexpected result. Since applicant has not shown some unexpected result the inclusion of this limitation is considered to be a matter of choice in design. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have 10% of acryl polymer, 5% of PTFE and 85% of water as a matter of design choice and applicant has not provided any criticality to the percentages.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hans, Stephens and Sugino as applied to claims above, and further in view of Hoshino et al (US. 3,695,044).

Hans, Stephens and Sugino disclose the invention substantially as claimed above but fail to disclose that the hardenable material is comprises of polyurethane or polyacrylate. Hoshino discloses an adhesive material which comprises polyacrylate. It would have been obvious to one having ordinary skilled in the art at the time of the invention to have the acryl polymer of Hans, Stephens and Sugino to be a polyacrylate as taught by Hoshino, since replacing one resin material by another is considered by be art equivalent (e.g. column 5, lines 25-29 of Hoshino).

8. Claims 11-14 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hans (DE 2626484) in view of Hans (DE 2918787), in view of Stephens (US. 2,889,163). The hardenable material has 0% of PTFE.

Hans '484 a seal element having at least one housing portion (e.g. 11), at least one dynamic seal (e.g. 5), at least one static seal portion (e.g. 12) affixed to the housing portion and the static seal portion having radial wave configuration (e.g. radial waves of 12).

Hans '484 discloses the invention substantially as claimed above but fails to disclose that the static seal portion is at least partially covered with hardenable material comprised of friction reducing element, the hardenable material comprises 5-20% acryl polymer and 0-10% PTFE (e.g. the layer 6 is acryl polymer). The hardenable material is hardenable under the effects of temperature and is a polymer glue (e.g. this would be the case since the hardenable material is what is claimed by applicant). Hans '787 discloses a static seal (e.g. layer 5) which is covered by a hardenable material (e.g. acryl polymer layer 6). It would have been obvious to one having ordinary skilled in the art at the time of the invention to have the static seal portion of Hans '484

to be covered by a hardenable material as taught by Hans '787, to provide a seal that can be connected to a housing (e.g. see Hans '787).

Hans '484 and Hans '787 disclose the invention substantially as claimed above but fail to disclose the hardenable material having water. Stephens discloses an acryl material with water. It would have been obvious to one having ordinary skill in the art at the time of the invention to have the hardenable material of Hans '787 to have water as taught by Stephens to provide a material that is resistant to oil and grease (e.g. column 4, lines 35-45 of Stephens).

9. Claims 11-14 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hans (DE 2626484) in view of Hans (DE 2918787), in view of Stephens (US. 2,889,163) and further in view of Sugino. The hardenable material has PTFE.

Hans '484 a seal element having at least one housing portion (e.g. 11), at least one dynamic seal (e.g. 5), at least one static seal portion (e.g. 12) affixed to the housing portion and the static seal portion having radial wave configuration (e.g. radial waves of 12).

Hans '484 discloses the invention substantially as claimed above but fails to disclose that the static seal portion is at least partially covered with hardenable material comprised of friction reducing element, the hardenable material comprises 5-20% acryl polymer and 0-10% PTFE (e.g. the layer 6 is acryl polymer). The hardenable material is hardenable under the effects of temperature and is a polymer glue (e.g. this would be the case since the hardenable material is what is claimed by applicant). Hans '787 discloses a static seal (e.g. layer 5) which is covered by a hardenable material (e.g. acryl polymer layer 6). It would have been obvious to one having ordinary skill in the art at the time of the invention to have the static seal portion of Hans '484

to be covered by a hardenable material as taught by Hans '787, to provide a seal that can be connected to a housing (e.g. see Hans '787).

Hans '484 and Hans '787 disclose the invention substantially as claimed above but fail to disclose the hardenable material having water. Stephens discloses an acryl material with water. It would have been obvious to one having ordinary skilled in the art at the time of the invention to have the hardenable material of Hans '787 to have water as taught by Stephens to provide a material that is resistant to oil and grease (e.g. column 4, lines 35-45 of Stephens).

Hans '484, Hans '787 and Stephens discloses the claimed invention except for the percentages of acryl polymer, PTFE and Water. Sugino disclose to have a compound with acryl polymer or rubber with PTFE. It would have been obvious to one having ordinary skill in the art at the time the invention to have the hardenable material of Hans and Stephens to have PTFE and a particular percent of acryl polymer as taught by Sugino, to provide air tightness (e.g. see abstract provide by applicant of JP2155980).

Regarding claim 21: Hans '484, Hans '787, Stephens and Sugino discloses the claimed invention except for the percentages of acryl polymer, PTFE and Water in claim 21. Discovering an optimum range of a result effective variable involves only routine skill in the art. In re Kulling, 895 F.2d 1147, 14 USPQ 2d 1056. Without the showing of some unexpected result. Since applicant has not shown some unexpected result the inclusion of this limitation is considered to be a matter of choice in design. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have 10% of acryl polymer, 5% of PTFE and 85% of water as a matter of design choice and applicant has not provided any criticality to the percentages



10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hans '484, Hans '787, Stephens and Sugino as applied to claims above, and further in view of Hoshino et al (US. 3,695,044).

Hans '484, Hans '787, Stephens and Sugino disclose the invention substantially as claimed above but fail to disclose that the hardenable material is comprises of polyurethane or polyacrylate. Hoshino discloses an adhesive material which comprises polyacrylate. It would have been obvious to one having ordinary skilled in the art at the time of the invention to have the acryl polymer of Hans, Stephens and Sugino to be a polyacrylate as taught by Hoshino, since replacing one resin material by another is considered by be art equivalent (e.g. column 5, lines 25-29 of Hoshino).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 571-272-7060. The examiner can normally be reached on 6:30am to 8:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tomas Will can be reached on 571-272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/V. P./  
Primary Examiner, Art Unit 3676

/Vishal Patel/  
Primary Examiner, Art Unit 3676